

REMARKS

Claims 1-9, all the claims pending in the application, stand rejected. Claims 1, 2 and 4 are amended.

Specification

The Abstract is objected to because it exceeds 150 words in length. The Abstract has been amended to comply with U.S. requirements.

Drawings

The Examiner asserts that Figs 6-9 should be labeled as "Prior Art," because the Examiner asserts that the illustrations are prior art. Applicant agrees and has labeled the Figures appropriately and is submitting replacement sheets herewith.

Upon review of the prior art Figures, Applicant noted that in FIG.7, the vertical elliptic circle represents an elliptically polarized light. While, the vertical bar having arrowheads in top and bottom represents the (linearly) polarized beam that has been passed through the polarizer 4, it does not belong to FIG 7 as originally submitted. Each vertical bar should be replaced with the equivalent of vertical elliptic circles which are between lens 3 and splitter 6. In correcting the illustration, Applicant has deleted the six vertical bars which have arrowheads.

As the illustration represents the prior art, no new matter is added.

Claim Informalities

Claims 6, 8 and 9 are objected to as being improper because there is insufficient antecedent basis for a particular limitation that appears in the three claims. The claims have been amended to remove this basis for objection.

Claim Rejections - USC §103

Claims 1, 3 and 5-9 are rejected under 35 USC 103(a) as being unpatentable over Nishiura et al (5,335,064) in view of Fujii et al (4,603,941). This rejection is traversed for at least the following reasons.

The Examiner first refers to Nishiura et al in formulating the rejection, particularly the structure in Fig. 19. The Examiner asserts that the reference discloses a crosstalk improvement module intervening between a first polarization maintaining fiber and a second polarization

maintaining fiber as claimed, but acknowledges that Nishiura et al does not disclose a splitter for splitting an output light of a polarizer or a photoreceptor for receiving a portion of light split by the splitter.

The Examiner looks to Fujii et al for a disclosure of a polarization maintaining fiber system using a splitter 43 to direct a portion of light output by a polarizer 23 onto a photoreceptor 35, 36 for purposes of detecting variations in the light signal, as illustrated in Fig. 7

Nishimura et al

Fig. 19 of the Nishimura et al. corresponds to the prior art illustrated in Fig. 6 of the present application. As explained at page 2, lines 3-5 of the present application, the structure in Fig. 19 of Nishimura et al. improves crosstalk. However, their optical power fluctuates according to the changing the polarization state of the polarizer incident light. This is a significant disadvantage that is overcome by the present invention. The Examiner acknowledges that Nishimura et al is deficient with respect to a teaching of a splitter and photoreceptor and asserts that such structure from Fujii et al could be inserted into Nishimura et al. This substitution is ineffective to render the presently claimed invention unpatentable.

Fujii et al

The polarization maintaining fiber system of Fujii et al. corresponds to Fig. 7 of the present application as another acknowledged approach in the prior art. Fujii et al accomplish a stable state in their outputting optical power. However, the Fujii et al system is not adapted to improve crosstalk characteristics, and certainly would not provide such advantage to Nishimura et al.

Fujii et al discusses the beam splitter 43 beginning at col. 4, lines 49. The structure is designed to provide a linearly polarized beam as an incoming light beam through the splitter 43 and the convex lens 45 to a first end. Further, as explained beginning at col. 5, line 36, the reflected beam is emitted from the first end through the first polarization maintaining fiber 41 to be delivered through the convex lens 44 and the beam splitter 432 to a receiving section as an outgoing light beam. None of this discussion concerns an improvement of cross talk, nor a suggestion of placing the splitter between a polarizer and a second of two lenses.

Claim 1 has been amended to specify that the splitter should be deployed between the polarizer and the second lens. An example of this feature is illustrated in FIG. 1 of the present application, in connection with a first exemplary embodiment. Neither Nishimura et al nor Fujii et al discloses or suggests the specifically claimed location of the splitter. Furthermore, there is no recognition of or even intention to achieve the advantage (i.e. "crosstalk improvement") which Applicant's arrangement provides.

That arrangement, which involves the location of the splitter between the polarizer and the second lens, cannot be understood or derived from Nishimura et al or Fujii et al, as it is not taught in either reference. Moreover, there is no motivation to combine the structure of Fig. 19 of Nishimura et al and the structure in Fujii et al in order to obtain the subject matter of the amended claims.

Revocation of Power of Attorney

The undersigned has been requested to take over prosecution of this and other pending applications assigned to Yokogawa Electric Corporation, the current owner on the basis of a merger of Ando Electric Corporation into Yokogawa Electric Corporation, as evidenced by the accompanying Request to Record Name Change. Executed Revocation forms are being obtained from authorized representatives of Yokogawa Electric Corporation and will be filed promptly.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Amendment Under 37 C.F.R. § 1.111
U.S. Application No. 10/600,395

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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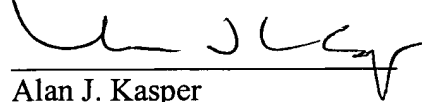
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CUSTOMER NUMBER

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Respectfully submitted,



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AMENDMENTS TO THE DRAWINGS

Figures 6-9

Attachment: Annotated Sheets